PATULOUS ANUS: ITS CLINICAL SIGNIFICANCE.

By ALFRED J. ZOBEL, M. D., San Francisco.

In a normal individual the anal canal is held closed tightly by the tonic contraction of its sphincter muscles. In certain individuals, however, we observe that when the buttocks are drawn apart there is more or less gaping of the anal orifice.

This condition of patulous anus results from an abnormal loss of tone in the sphincter muscles, which may be due either to a fault intrinsically within the muscle, or to some disturbance in its nerve supply. When purely muscular the cause may be a direct injury to the muscle; an infiltration by a malignant or a syphilitic growth; a participation in a general muscular weakness; or the presence of a foreign body in the rectum which prevents the muscle from completely contracting. When the nerve supply to the sphincters is at fault the causative lesion may be either central or peripheral.

Complete fecal incontinence does not necessarily follow when the anus becomes patulous. Some individuals, in whom the muscle alone is only slightly affected, have fairly good control for at least solid bowel movements. Others, with a patulous anus of still lesser degree, are able to retain not only solid and liquid but even gaseous stools.

In those whose muscular system has become greatly weakened by long protracted ill health the anal sphincters share in the general weakness, and the anus may become patulous. As a rule they do not suffer from fecal incontinence unless in the typhoid state, since by an effort of the will they are able to assist the external sphincter in performing its function, through augmenting its action by strongly contracting their glutei muscles and bringing them together.

In the aged the sphincters frequently become atonic. There being here a true paralysis of the muscles, incontinence of feces invariably follows.

When the proctoscope is used on the old and enfeebled the anus will frequently remain patulous for some little time after the tube is withdrawn. The mere introduction of the instrument often causes quite a relaxation of the sphincters, and this makes a high proctoscopic examination in elderly people a rather troublesome procedure, since the air which is employed to inflate the bowel immediately escapes backward along the sides of the tube.

A patulous condition of the anus, remaining for several days, or even longer, often follows an overly long retention of a rectal plug introduced as a dressing after operation.

According to Tuttle, after simple divulsion of the sphincter ani muscle its tonicity sometimes fails to become properly reestablished. He considers this due in all likelihood to the presence of some form of nerve or spinal cord disease. Fecal incontinence is the result.

Following lacerated wounds of the sphincter muscles their power to contract becomes greatly impaired. Irregular, jagged, or diagonal incisions result in vicious union. A tearing of the sphincter ani muscle during labor, without any perineal laceration being evident, may end in permanent relaxation of the anal aperture. A case where there was an isolated rupture of the sphincter during labor was reported recently by Rosenfeld.

When there is an involvement of the sphincters by a malignant neoplasm, or by a syphilitic infiltration, the anus becomes at times markedly patulous. Such a condition was demonstrated in my service at the San Francisco Polyclinic. An otherwise rugged old man applied for relief from a condition which he had self-diagnosed as bleeding hemorrhoids, and for which, previous to coming to the clinic, he had been treated without any examination being made. Our examination showed a markedly patulous anus, together with the presence of a well-developed infiltrating cancerous growth low down in the rectum.

Other foreign bodies in the rectum, such as a large fecal impaction, or an intussusception of the bowel may also cause the anus to become patulous. In two cases of intussusception of the bowel in children which came under my observation, a relaxed anal opening was seen in each. Where there is a history of a child with diarrheal and blood-stained fecal movements, accompanied by severe abdominal pain, I immediately examine for a patulous anus, which I deem one of the characteristic symptoms of an intussusception low down in the bowel.

The constant and prolonged use of overly large rectal dilators and specula, often results in stretching and weakening the anal sphincters. In pederasts a patulous anus gives silent witness to their secret practices. A short time ago a boy of twelve years, bright, intelligent, and of good parentage, was referred to me for operation upon an ischio-rectal abscess. At examination there was noticed a patulous anus. My suspicions being aroused smears were made of the secretion from the anus and rectum, but they were reported as negative with reference to the presence of the gonococcus of Neisser. Questions to the lad, which were delicately put but pregnant with meaning, were cleverly parried, and I hesitated to state my suspicions to the anxious parents. During convalescence the boy's father, shocked and distressed, informed me that he had just made the discovery that his child had been the victim of an older lad; and thus my suspicions were verified. My suspicion in this instance was due to the fact that in all the cases of gonorrhea of the rectum in males that have come under my observation, this condition of patulous anus was present. As a result, whenever an examination of a male shows a patulous anus without any lesion being discovered sufficient to account for the relaxation of the muscle, the patient is always questioned as to when he acted the part of a passive pederast. Notwithstanding strenuous and indignant denials at first our presumptive diagnosis is usually verified by the patient's confession later on.

During spinal anesthesia the sphincters of the

anus quickly lose their tonicity and the anal canal becomes quite patulous. Operative procedures can then be performed with far less stretching of these muscles, with its consequent tearing and bruising of the tissues, than under any other method of anesthesia.

In those stricken with apoplexy, uremia, epileptic coma, and allied conditions, there is complete relaxation of the sphincter muscles, and to this is due their fecal incontinence.

The excessive use of alcohol and tobacco has been reported to cause an atony of the sphincters. The former especially, through immoderate and prolonged usage, may give rise to a neuritis, wherein there occurs an involvement of the nerve supply to the anal sphincters. The relaxed anal canal permitting numerous unrestricted fecal movements, together with the pitiful helplessness of the sufferer, makes life miserable not only for himself but for his attendants. Such an instance came under my observation some four years ago, in a heavily built man of 64 years. His anal canal was most remarkably relaxed, and the tormenting diarrhea which was added to his pain and to his utterly helpless condition truly caused him to look for death as a welcome visitor. Yet in time he slowly recovered, and as he acquired power over his other muscles the anal sphincters regained theirs, and finally his patulous anus became perfectly normal.

Bodenhamer has reported that atony of the anal sphincters is frequently present in hypochrondriacs, and in hysterical women. It has never been my good fortune to have had the opportunity to observe this.

In myelitis, and in other affections of the cord, there is an involvement of the nerve supply to the sphincters, which results in the anus becoming patulous. This gaping of the anus may be one of the earliest symptoms of a locomotor ataxia. Shortly before the old building of the San Francisco Polyclinic was destroyed in the great fire of 1906, a man, 39 years of age, came into my service in the rectal clinic. His only complaint was inability to control his bowel movements after the first sensation of a desire to evacuate was experienced. Examination disclosed a patulous anus, together with what was thought at the time to be a marked thinning of the external sphincter muscle. The cause of the latter could not be accounted for. Unfortunately no examination of his reflexes was made, nor, to be candid, even considered, and the diagnosis was held in abeyance. For six months or so after the disaster all track of him was lost, until one day I saw him walking along one of the city's thoroughfares, with that unmistakable, pathognomonic gait of locomotor ataxia; and thus the diagnosis was forcibly thrust upon me.

About a year ago, a charming woman, 30 years of age, ten years married, and of splendid social position, was referred to me by her physician for a diagnosis of the cause of her partial fecal incontinence. Examination showed a patulous anus; everything else normal in the bowel. Bearing well in mind my previous experience she was questioned, and the information was received that early in her married life she had several miscarriages at three months' term. To avoid arousing her suspicions no further attempt was made to obtain a luetic history. Her knee reflexes were absent; her eye reflexes sluggish. Further examination was left to her attending physician. A diagnosis of a probable luetic lesion of the cord was given him, and a Wassermann test advised. This was done, and found to be positive. Recently her physician informed me that she is now markedly ataxic.

REPORT OF A CASE OF STENOSIS OF THE DUODENUM DUE TO GALL STONES; OPERATION; RECOVERY.

By WILLIAM C. VOORSANGER, M. D., San Francisco, and CHARLES G. LEVISON, M. D. San Francisco.

The patient, A. L., female, age 46, came into the medical service of Mt. Zion Hospital September 2, 1912, complaining of slight pains in the abdomen, shortness of breath and vomiting. She made the statement that she had been ill more or less for two years with pains in her back. About 1 year ago she began to get dull throbbing headaches and the back pain increased. About six months ago vomiting began and she consulted a physician who treated her for several weeks in the hospital without appreciable result. Continuing to grow weaker and suffering constantly, from constipation, dizziness, headache and vomiting she came to the hospital (Mt. Zion). At the latter place it was discovered upon weighing her that she had lost about 40 lbs. in one year. She was unable to walk unassisted due to great weakness. She added just prior to examination that any exertion caused a sinking spell. Her family history is negative and personal habits have always been good.

Status: Anemic woman, with pigment scars about face, no glandular enlargement, pupils react normally, mucous membrane of mouth and conjunctiva anemic. No disturbance in the course of the cerebral nerves.

Chest well developed, lungs normal. Heart, borders normal, no murmurs, but sounds weak. Pulse 80 to 90, at times intermittent, often difficult to palpate. Abdomen, soft, flat, easily palpated, no masses to be felt, liver and spleen in apparently normal position; soft, slightly painful, area to palpation in the right upper quadrant slightly above and to right of umbilicus. Skin in right axillary region painful to pressure.

Patella reflexes slightly exaggerated; slight edema of legs. Rectal examination negative. Vaginal examination negative.

Laboratory findings:

Urine—acid, specific gravity 1020, no albumen, no sugar, no casts, a few pus corpuscles.

Blood examination:

Red blood corpuscles	4,500,000
White blood corpuscles	10,000
Hemoglobin	80%

Differential count:

Polymorph. neutrophiles	49%
Lymphocytes	43%
Large mononuclears	4%
Eosinophiles	3%
Basophiles	1%

Feces examination:

Showed no occult blood; eggs of tricocephalus dispar accounting for the eosinophilia, considerable mucus, and starch granules.

Stomach contents showed absence of free acid.

Vomitus: Constantly green in color.

An X-Ray photograph of patient's stomach was attempted but rendered impossible through her vomiting of the bismuth.

The cardinal points standing out for diagnosis in